

## POP-UP LAPTOP KEYBOARD

## FIELD OF THE INVENTION

- 5        The present invention relates generally to an apparatus used in a laptop computer that aids in the comfort and ease of use of the device. The present invention relates specifically to an adjustable keyboard used in a laptop computer or other electronic device that is more ergonomically efficient than conventional laptop computer keyboards.

## 10 BACKGROUND

- Personal computers are commonly used at the workplace and at home. As people become more dependent on personal computers, time spent using them has increased. Modern ergonomics theory and experience teaches that improper posture of human bodies during the use of computers can produce many types of repetitive, stress and strain injuries, such as Carpal Tunnel Syndrome, and eye fatigue. Conventional theory holds that, in an ergonomically arranged computer unit, the keyboard should be arranged at elbow level while the arms are parallel to the body, and the top of the display unit should be at approximately eye level, or at most 15 degrees below. Manufacturers of desktop computers have taken steps to design their products to alleviate these repetitive-type stress injuries. One example of such an advancement involves using a split keyboard as opposed to a traditional keyboard. In a split keyboard, the keyboard is separated in the middle and the two separate halves are angled in order to allow the wrists to be held in a more natural position while typing.

- 25        The typical laptop computer (also referred to as portable personal computers or notebook computers) includes a display screen housing hinged to a main computer base housing. The display screen housing folds down against the main computer base housing where the two housings latch together. The main computer base housing includes the keyboard, disk drives, input/output ports, battery pack, and all hardware associated with running, processing and storing data.

- 30        ~~Many conventional laptop computers are not used in an ergonomic fashion.~~

- ~~Laptop computers have become more commonplace due to improvements in micro~~

Many conventional laptop computers are not used in an ergonomic fashion. Laptop computers have become more commonplace due to improvements in micro-processing speed, weight reduction, battery life, display technology, Internet accessibility, and affordability. As laptop computer technology continues to improve and approaches that of desktop computers, more and more users will use laptop computers as their sole computer device.

While there have been ergonomic improvements incorporated into desktop computers, the small size and need for portability of laptop computers have prevented manufacturers from incorporating many of these ergonomic advances into laptop computers. While some laptop manufacturers have attempted to implement ergonomic advances, such as the split keyboard, further advances are needed.

#### BRIEF SUMMARY

In the present invention, keyboard positioning supports are presented that are used to adjust the height, slope or angle of a keyboard, with respect to and from the base of a laptop computer or other electronic device, without increasing the size or the device when stowed or transported. Various embodiments of the present invention may be provided.

One embodiment of the present invention comprises an ergonomic laptop computer apparatus that provides a user with a more comfortable angle for the user's wrists and hands while using the computer. The apparatus includes a keyboard housing having a top surface comprising a plurality of keys, a bottom surface operationally connected to a main computer body, and positioning supports connected to the keyboard housing that extend and adjust to allow the keyboard to change its slope relative to the main computer body. The apparatus may be included on laptop computers as manufactured and sold, or sold as a retrofit kit that replaces existing non-ergonomic laptop keyboards.

In one embodiment, the present invention provides an apparatus that includes a main computer body, a display body operationally connected to the main computer body, a keyboard housing having a top surface comprising a plurality of keys, a bottom surface operationally connected to the main computer body, a front edge closest to a user, a back edge farthest from the user, two side edges, and positioning supports functionally